

**QUERCUS GARRYANA / VIBURNUM ELLIPTICUM /  
TOXICODENDRON DIVERSILOBUM**

Oregon white oak / oval-leaf viburnum / poison-oak

Abbreviated Name: QUGA/VIEL/TODI

Synonym: *Quercus garryana* / *Viburnum ellipticum* /  
*Rhus diversiloba*

Sample size = 14 plots

**DISTRIBUTION:** Occurs primarily near the Columbia River in Clark, Cowlitz, and western Skamania counties. One outlier plot is located in southeastern Thurston County. Also occurs in a small area on the Oregon side of the Columbia River.

**GLOBAL/STATE STATUS:** G1S1. Very small global range. There are fewer than 20 occurrences total and only two in Washington are known to be relatively high-quality. Most examples are very small and/or have been degraded. Threats include development/conversion and non-native species.

**ID TIPS:** Dominated by Oregon white oak. Oval-leaf viburnum and poison-oak are usually co-dominant: one of them is always >10% cover. Occurs on shallow or rocky soils.

**ENVIRONMENT:** These sites are dry to very dry and appear to be relatively nutrient-rich. Occurs on shallow-to-bedrock or extremely stony soils, many of which are derived from Columbia River basalt. Often occurs on talus. Usually found on a moderate to steep slope and a sunny aspect (especially southwest).  
Precipitation: 46-69 inches (mean 50)  
Elevation: 20-750 feet  
Aspect/slope: SE to NW / 3-75% slope (mean 41)  
Slope position: upper, mid, short, terrace, ridgetop, lower  
Soil series: rockland, rock outcrop, Olympic, xerorthents

**DISTURBANCE/SUCCESSION:** Douglas-fir is likely to increase in abundance over time in the absence of disturbance. Some of these areas may not have been forested until after post-settlement fire suppression. Because of this, and the rarity of the type, it is unclear to what extent this association occurred in the pre-Western settlement landscape.

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**Vegetation Composition Table (selected species):**

Con = constancy, the percent of plots within which each species was found;  
Cov = cover, the mean crown cover of the species in plots where it was found;  
+ = trace (< 0.5% cover).

Trees	Kartesz 2005 Name	Con	Cov
Oregon white oak	Quercus garryana var. garryana	100	77
Douglas-fir	Pseudotsuga menziesii var. menziesii	50	6
<b>Shrubs and Dwarf-shrubs</b>			
common snowberry	Symphoricarpos albus var. laevigatus	100	19
poison-oak	Toxicodendron diversiloba	93	23
oceanspray	Holodiscus discolor	93	14
oval-leaved viburnum	Viburnum ellipticum	86	27
serviceberry	Amelanchier alnifolia	86	9
Indian plum	Oemleria cerasiformis	86	9
tall Oregongrape	Mahonia aquifolium	79	5
trailing blackberry	Rubus ursinus var. macropetalus	71	3
baldhip rose	Rosa gymnocarpa	64	2
<b>Graminoids</b>			
Alaska oniongrass	Melica subulata	50	3
blue wildrye	Elymus glaucus	50	3
<b>Forbs and Ferns</b>			
cleavers	Galium aparine	86	6
woods strawberry	Fragaria vesca ssp. bracteata	86	5
licorice fern	Polypodium glycyrrhiza	79	4
small-flowered nemophila	Nemophila parviflora var. parviflora	79	2
Nuttall's peavine	Lathyrus nevadensis ssp. lanceolatus var. pilosellus	71	2
yerba buena	Clinopodium douglasii	57	9
big-leaved sandwort	Moehringia macrophylla	57	7
fringecup	Tellima grandiflora	57	3
miner's lettuce	Claytonia perfoliata ssp. perfoliata	50	13
coastal woodfern	Dryopteris arguta	50	5
broad-leaved penstemon	Penstemon ovatus	36	6
enchanter's nightshade	Circaea alpina ssp. pacifica	36	6

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Chris Chappell photo



Plot locations  
of QUGA/VIEL/TODI  
in the Puget Trough

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**VEGETATION:** Forest, or less commonly woodland, dominated by Oregon white oak. Douglas-fir is sometimes present in low abundance. The understory consists of a relatively diverse and structurally complex shrub layer. Oval-leaf viburnum (a tall shrub) and poison-oak (a low shrub and climbing vine) are usually co-dominant, along with common snowberry and, to a slightly lesser extent, oceanspray. Serviceberry, Indian plum, tall Oregongrape, trailing blackberry, and baldhip rose are usually present as well. The herb layer can be diverse. Cleavers, woods strawberry, licorice fern, small-flowered nemophila, and Nuttall's peavine are the most frequent. Miner's lettuce and yerba buena are prominent on about half the plots. Coastal woodfern and broad-leaved penstemon are fairly common species in this association that have not been found in other Puget Trough associations.

**CLASSIFICATION NOTES:** This association has not been previously described in the literature.

**MANAGEMENT NOTES:** Where Douglas-fir are present or establishing, their removal should be considered for long-term maintenance of the association. The potential for increases in non-natives with ground disturbance should be weighed when making decisions about tree removal. Girdling large trees may be the best strategy for them if needed. Little is known about the effects of fire on this association.

**BIODIVERSITY NOTES:** State candidate slender-billed white-breasted nuthatch (*Sitta carolinensis aculeata*) is dependent on oak woodland habitat and is known to occur in this association. State sensitive small-flowered trillium (*Trillium parviflorum*) has been recorded in this association.

Chappell, C.B. 2006. Upland plant associations of the Puget Trough ecoregion, Washington. Washington Department of Natural Resources, Natural Heritage Program, Olympia, WA. [\[http://www.dnr.wa.gov/nhp/refdesk/communities/pdf/intro.pdf\]](http://www.dnr.wa.gov/nhp/refdesk/communities/pdf/intro.pdf).